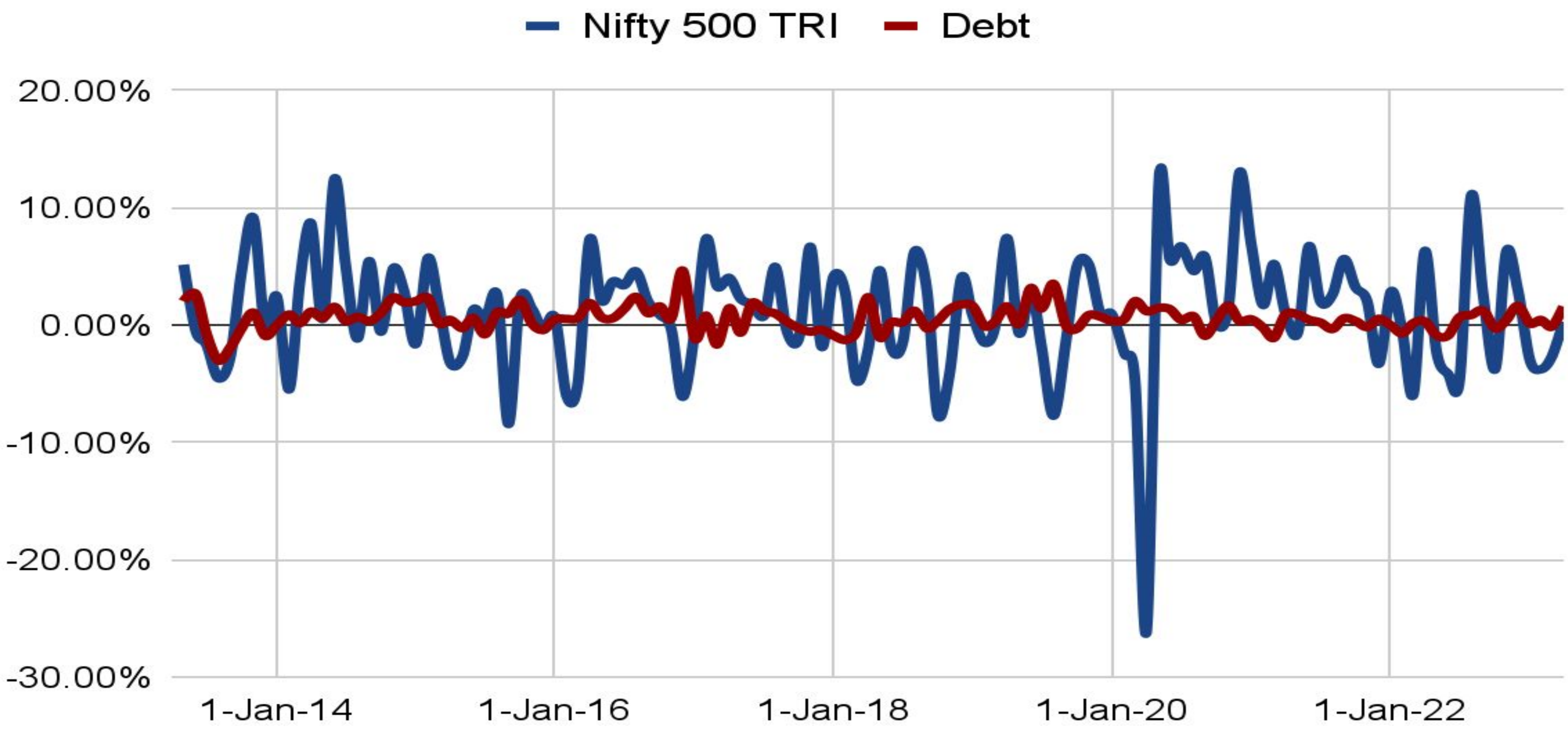
Discussing about the Fixed Income Space by Mansi Kariya.

Why Debt ?

- Diversify Risk of the portfolio
- Regular income
- Predictable band of returns expected within the investment horizon

Monthly returns Equity and Debt

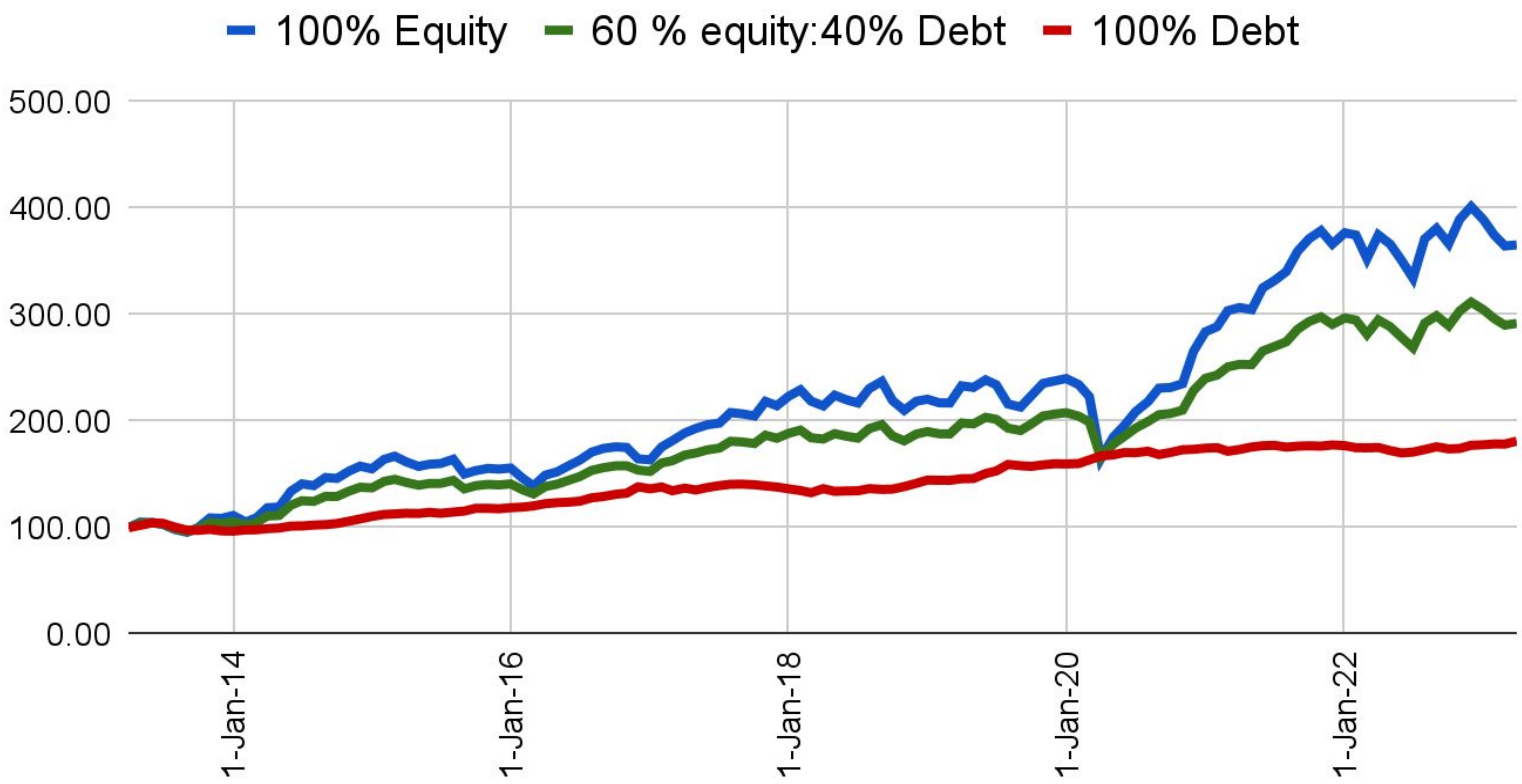


Source: Nifty 500 returns- Equity returns and avg of Gilt index and median dynamic debt fund - debt returns

How much in Debt ?

- 100 - AGE for equity
- Nature of regular Income
- Risk appetite of the individual Investor
- Investment goals and cash flow requirements play an important role
- Every factors work together

Rs 1,00,000 invested over 10 years



Asset allocation	Returns	SD
100% Equity	13.84%	30.74%
100% Debt	6.95%	6.27%
60:40 Equity: Debt	11.08%	18.94%

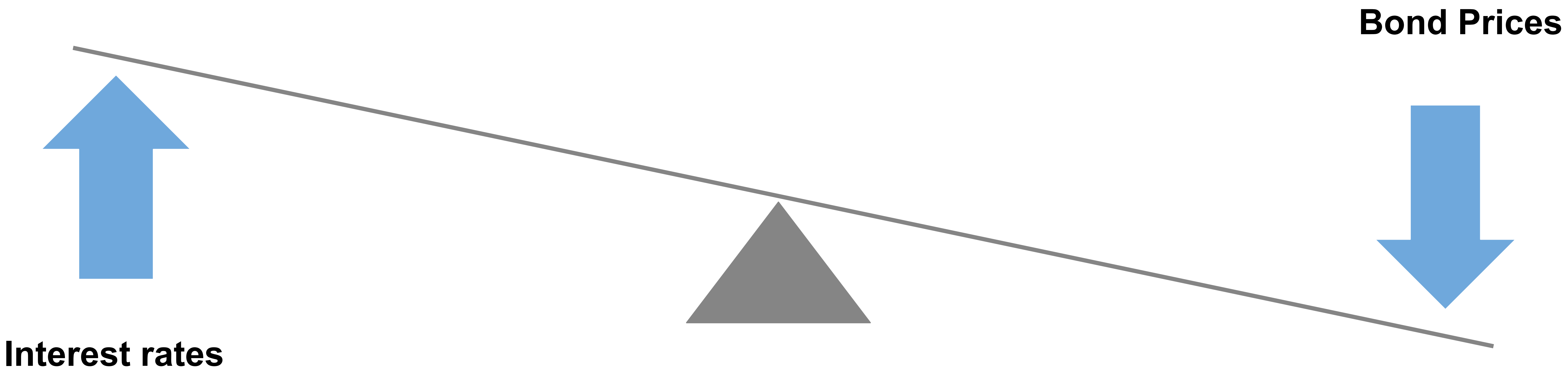
Source: Nifty 500 returns - Equity returns and avg of Gilt index and median dynamic debt fund - debt returns

Risks for Debt Investment

Credit Risk - Credit risk arises when the borrower is unable or delay in repaying principal or interest.

Interest rate risk

Take the bond for example: a bond is a fixed-income investment and bond prices and yields move in opposite directions. If interest rates rise, bond prices fall and vice versa.



Interest rate risk matters if your investment horizon does not match the maturity of the investments especially if you need money in a short time while the bonds are of a longer maturity.

Duration Risk - Duration is the magnitude of interest rate risk of a fixed income security Higher the duration of a security , greater is the impact felt on the prices from the changing interest rates.

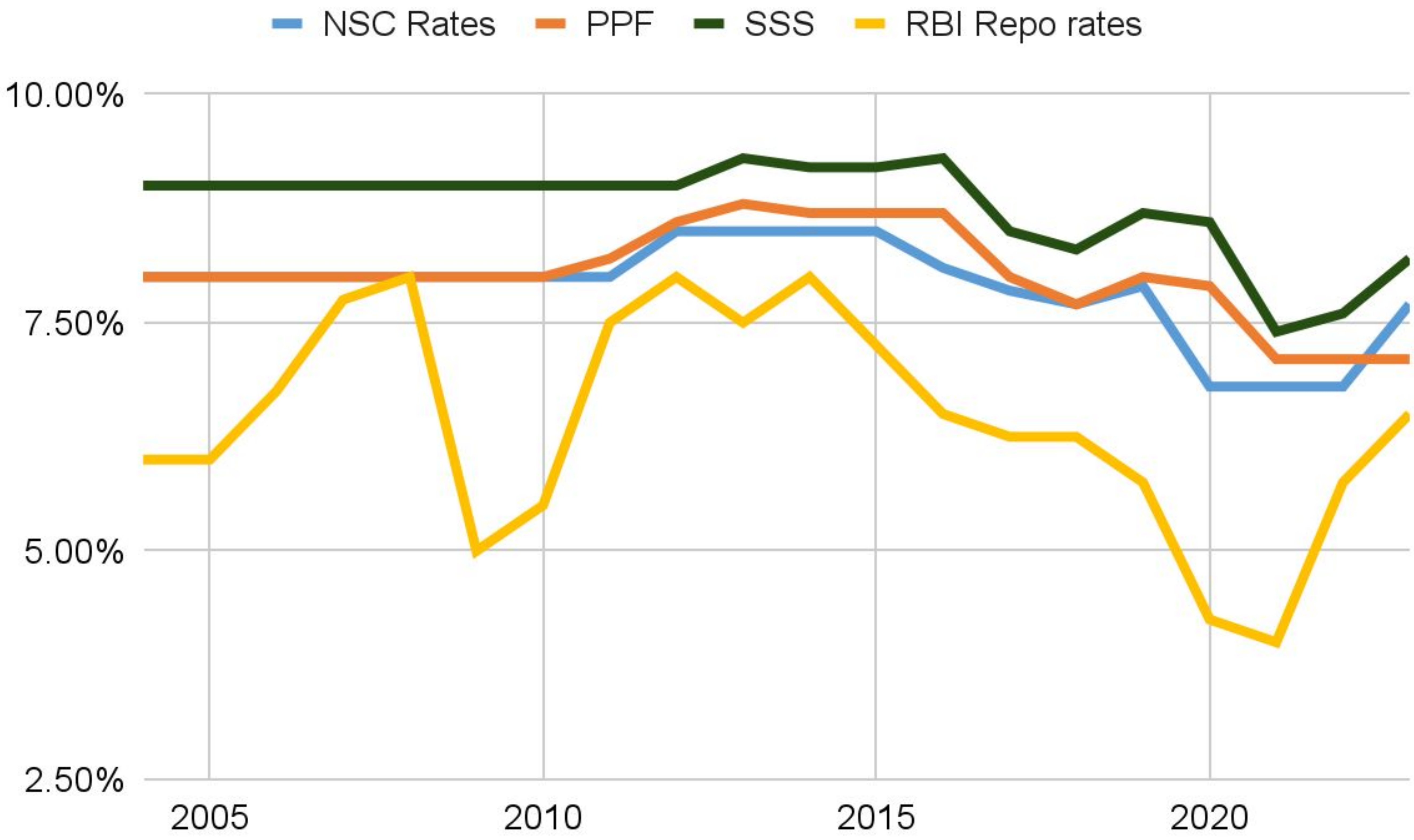
Liquidity Risk- Liquidity risk means the difficulty to liquidate investment when desired, or it has to be sold below its fair value.

Debt Investment

- Government small saving scheme
- Bank Fixed Deposits
- Fixed deposits issued by FI/HFCs/NBFCs
- Debt Mutual Funds
- RBI Direct Lending Scheme
- Direct Investment in listed Bonds

Small savings schemes

Savings Scheme	Rate	Tax Deduction	Interest Taxable?
Post Office Savings Account	4.0%	No	Yes
Post Office Recurring Deposit	6.2%	No	Yes
Post Office MIS	7.4%	No	Yes
Post Office Time Deposit (1/2/3/5 yr)	6.8/6.9/7.0/7.5%	No	Yes
Kisan Vikas Patra (KVP)	7.5%	No	Yes
Public Provident Fund (PPF)	7.1%	**Yes**	**No**
Sukanya Samriddhi Yojana	8%	**Yes**	**No**
National Savings Certificate	7.7%	**Yes**	**Yes**
NPS (National Pension Scheme)	Market Linked	**Yes**	Yes
Mahila Samman Saving certificate 2 years	7.5%	**Yes**	Yes
Senior Citizens' Saving Scheme (SCSS)	8.2%	**Yes**	Yes



https://www.financialcalculatorindia.app/post-office-interest-rates-history.html

Small Savings Schemes

Pros

- Safest form of debt investment
- Less volatility in yields

Cons

- No liquidity available,though one can take loan against certificates
- There is limit for individual investors to invest in these schemes

  - 30L overall for SSSS

  - 1.5L pa for PPF and SSY

Bank Fixed Deposit

- The most preferred long-term investment vehicle
- Bank Fixed deposits is an investment option with fixed rate of return
- Maturity ranges from 7 days to 10 years
- Taxable as per tax slab of individual investors
- Insurance cover only up to Rs 5,00,000 deposits with each bank.RBI's Deposit Insurance Fund covers 1.8% of bank deposits under ₹5 lakh
- Can be redeemed with a penalty

https://www.fortuneindia.com/macro/rbis-deposit-insurance-fund-covers-18-of-bank-deposits-under-5-lakh/111973

Company Fixed Deposits

- Term deposits offered by Corporates
- Usually offered at a higher interest rate as compared to banks
- It is not insured as against Rs. 5,00,000 in banks
- Penalties on premature withdrawal is usually higher as opposed to bank FDs
- Don't invest in company FDs unless you are sure about the company's credentials
- Taxed as per tax slab of individual investors

FD rates of top Public Sector banks and private Banks

Fixed Deposit rates	SBI	AXIS BANK	HDFC BANK	KOTAK BANK	BOB
1 Year -2 Year	6.80%	7.15%	7.00%	7.20%	6.75%
3 Year -5 Year	6.50%	7.00%	7.00%	6.50%	6.50%
5 Year -10 Year	6.50%	7.00%	7.00%	6.20%	6.50%

FD rates of Top HFCs and NBFCs

Fixed Deposit rates	BAJAJ	HDFC	Shriram Finance	Mahindra Finance	HUDCO
1 Year -2 Year	7.45%	7.25%	7.75%	7.50%	7.50%
2 Year - 3 Year	7.55%	7.30%	8.15%	7.60%	7.50%
3 Year -5 Year	7.65%	7.20%	8.30%	7.75%	7.25%

Debt Mutual Funds

- High Liquidity
- Multiple options based on investment horizon and risk appetite
- Diversification with respect to the exposure in different securities and funds
- Partial withdrawal available
- Debt Funds have potential to offer capital appreciation over a period of time
- No defined time horizon

Changes in tax structure of debt mutual funds

The Finance Minister on 24th March 2023, announced an amendment to the Budget 2023 in the capital gains tax on debt funds.

<table>
<tr><th>Holding period</th><th>Debt Mutual Funds
before 31st March 2023</th><th>Debt Mutual Funds
from 1st April 2023</th></tr>
<tr><td>Less than 3 years</td><td>Treated as STCG and taxed as per tax slab</td><td rowspan="2">Treated as STCG and taxed as per tax slab</td></tr>
<tr><td>More than 3 years</td><td>Treated as LTCG and taxed @20% with indexation benefit</td></tr>
</table>

Taxation compared to FDs

- Income from Debt Mutual Funds are taxed only when investments are redeemed

- Income from debt funds classified as capital gains and not interest income , can also be set off.

Important terms for Debt Mutual Funds

Yield to maturity

- YTM is the total rate of return an investor expects to earns if the bond he or she has invested is held to maturity.

- But , there are variation due to coupon reinvestment.

Average Maturity - It is the weighted average maturity of all the securities in a debt fund.

Macaulay Duration - Macaulay duration calculates the weighted average time to receive the cash flows from debt security. It is the minimum time that is required to invest in a debt fund to minimize the interest rate risk

Modified Duration - Modified duration calculates bonds sensitivity to interest rate changes.So a bonds with longer maturity are more sensitive to interest rate changes.

Expense ratio- As returns are comparatively low on debt funds the expense ratio becomes a critical consideration for debt funds.

Where do Mutual Funds Invests?

Instruments	Credit Risk	Interest rate risk
T-Bills, G-Sec and SDLs	No	High
Certificate of deposits	Moderate	Moderate
Commercial papers issued by corporates and NBFCS	High	Moderate
Nonconvertible Debentures issued by PFI ,PSUs	Low	High
Nonconvertible Debentures issued by NBFCs and corporates	High	High
Tier II Bonds issued by Banks (complex instruments)	High	High
Tier I Bonds (Riskier than even equity)	High	High

Debt Mutual Funds

Passive	Active
Aim to replicate underlying Index	Aim to outperform index
Relatively low cost	Relatively high cost
Better visibility of returns	Possible higher returns
Pre-defined maturity	No pre-defined maturity
Low credit risk	Carry interest rate risk and credit risk

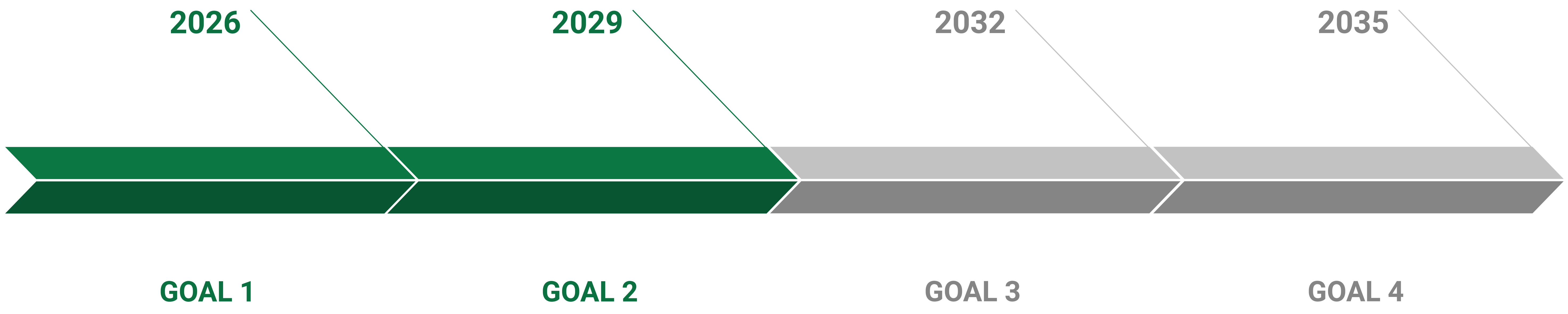
Passive Debt Mutual Fund

- Passive Liquid Funds
- Passive Gilt Funds
- Passive Target Maturity Funds
  - Index Funds
  - Exchange Traded Funds (ETF)

Target Maturity Funds-Index Fund

- Invest in G-Secs, SDLs and PSU bonds
- Track an underlying bond index customized for the scheme
- Defined maturity dates
- Returns are in line with YTM
- Exposed High interest rate risk if withdraw funds before maturity
- Low expense ratio as these are passively managed

Achieving Goals through Bond Laddering of TMF



Target Maturity Funds- ETF

- Same as Target maturity index funds
- They can be bought and sold on the exchange
- They can be bought through Demat account and also FOF route through mutual funds
- Expense ratio is half than index funds
- They are rebalanced quarterly and disclose portfolio everyday

Active Mutual Funds

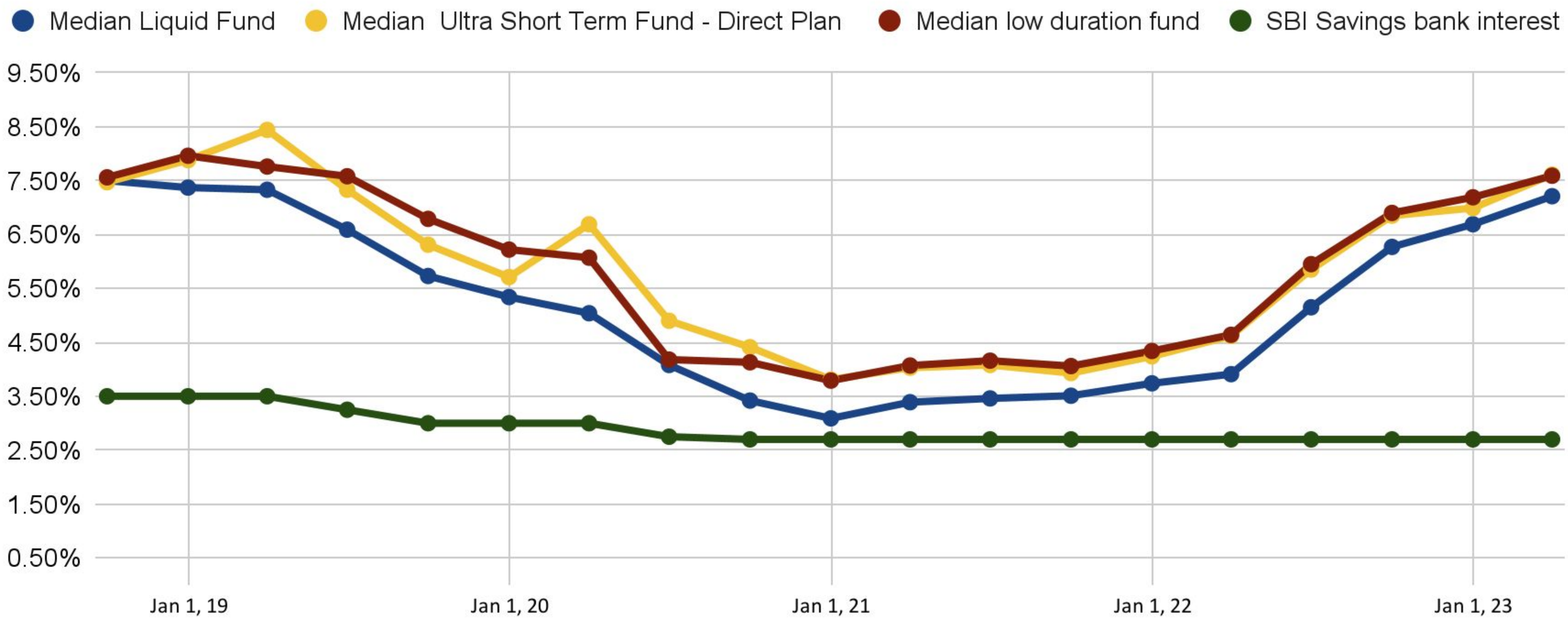
Money Market Funds

Liquid Fund (0-3 M)	Ultra Short Duration Fund (3-6 M)	Low Duration Fund (6-12 M)	Money Market Funds (upto 12 M)

Money Market Funds

- Alternative to savings bank account
- Low interest rate risk due to low durations
- Consider YTM as the expected return
- Avoid investing in funds which invests in low rated papers
- Can also be helpful to STP in equity schemes
- No exit load after 7 days

Return Expectations



Source: YTM of median liquid, ultrashort duration and low duration funds and sbi rates from SBI.co,in

Duration based funds

Macaulay Duration		
1-3 Y	**Short Duration Fund**	• Low sensitivity to interest rate changes,exposed to credit risk • Higher yields than liquid fund /ultra-short duration fund • Suitable for investor with 1-3 years of investment horizon
3-4 Y	**Medium Duration Fund**	• More Vulnerable to interest rate fluctuations • High credit Risk • Investment horizon less than MD of the fund may give negative returns
4-7 Y	**Medium to long Duration Fund**	• High Interest rate risk • High Credit Risk
< 7 Y	**Long Duration Fund**	• High Interest rate risk • High Credit Risk • Fund with lower rated securities may give better returns, but are exposed to high credit risk

Historical Return and return expectations

Category of Fund	YTM	1Y	3Y	5Y
Short duration Fund	7.41%	4.92%	6.09%	6.00%
Medium Duration Funds	7.84%	2.51%	6.19%	5.47%
Medium to Long duration fund	7.68%	5.08%	5.52%	5.98%
Long Duration Funds	7.51%	5.56%	4.54%	6.37%

Source: Average returns *prime investor, Average YTM moneycontrol.com

Dynamic Duration Funds

Dynamic Bond Fund

Banking & PSU Debt Fund

Corporate Bond Fund

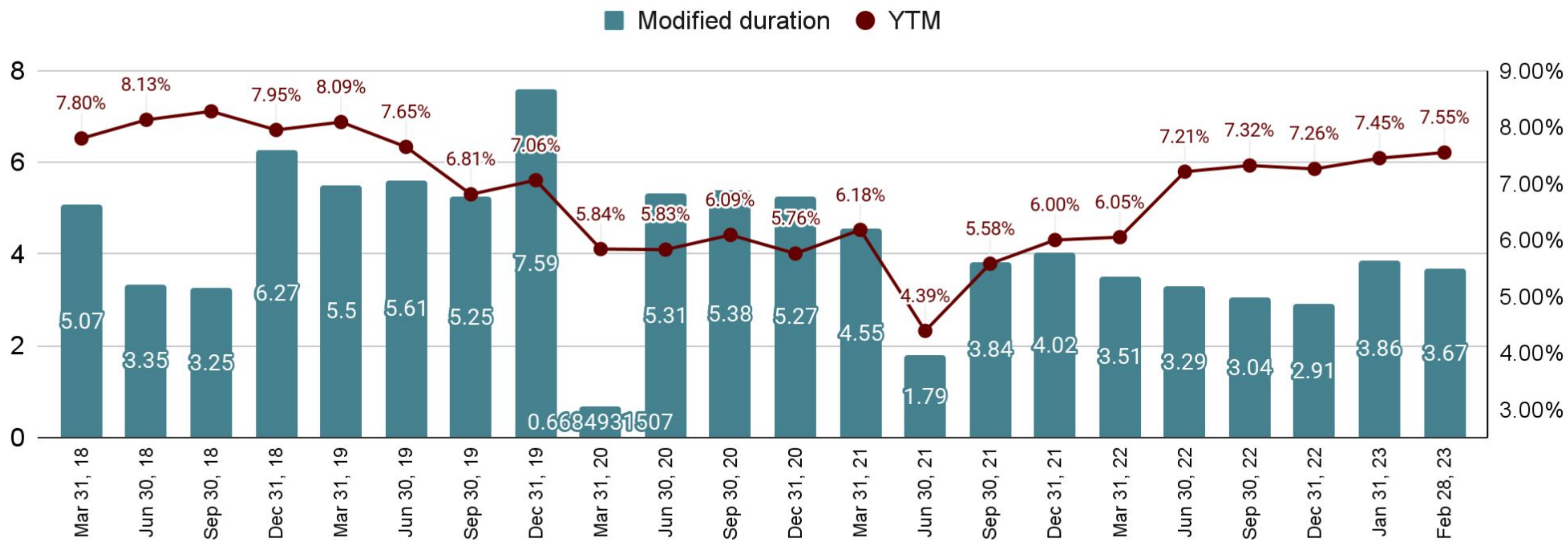
Gilt Bond Fund

Credit Risk Fund

Dynamic Bond Fund

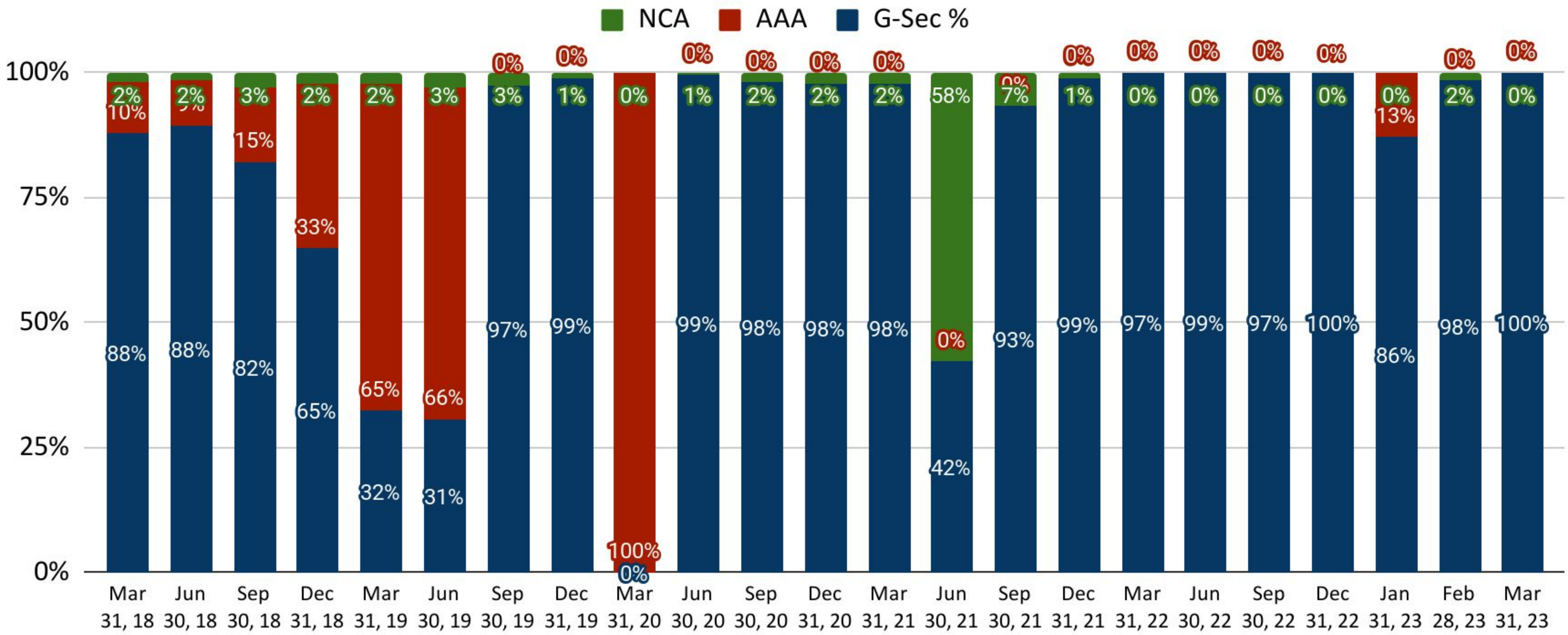
- Dynamic Bond fund can invest in varying maturities and debt instruments depending upon the market environment
- They can shift duration and credit profile based on market expectations of interest rate risk
- Possible higher returns with increased risk
- Can give negative returns if the market expectation goes wrong and there is mispricing of risk

Change in duration and YTM



Source: Median Dynamic Bond Fund

Change in composition

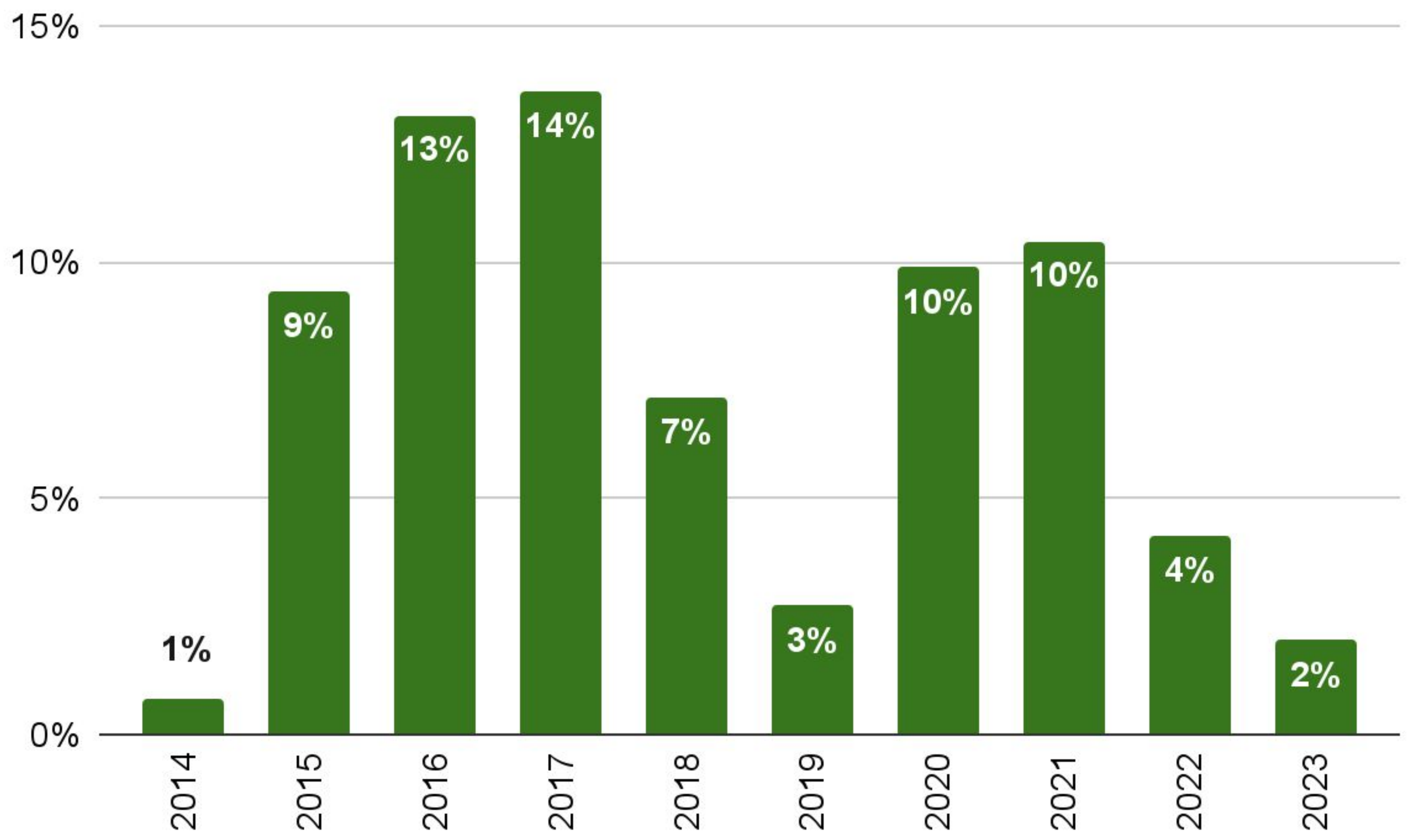


Source: Median dynamic bond Fund

Gilt Fund

- Gilt fund invest in both central and state government issued securities
- Duration range from 1 year to 10 years.
- Manager change the duration with market expectation of interest rates
- Possible high return in the case of an economy with falling interest rates,while the opposite in case of rising interest rates
- 4-6 years of investment horizon is required

Returns



Source: Rolling returns of median Gilt Fund

Corporate Bond Fund

- Corporate Bond Fund invests in bonds issued by Banks, PFI and corporates
- As per SEBI Mandate, 80% of the portfolio needs to be invested in AA+ and above papers
- Duration is generally 2-5 years as corporates generally raise for that period
- Carry less interest rate risk than Gilt Funds, but credit risk needs to be monitored
- Credit worthiness of portfolio companies is important factor to be considered before investing
- Carry liquidity risk

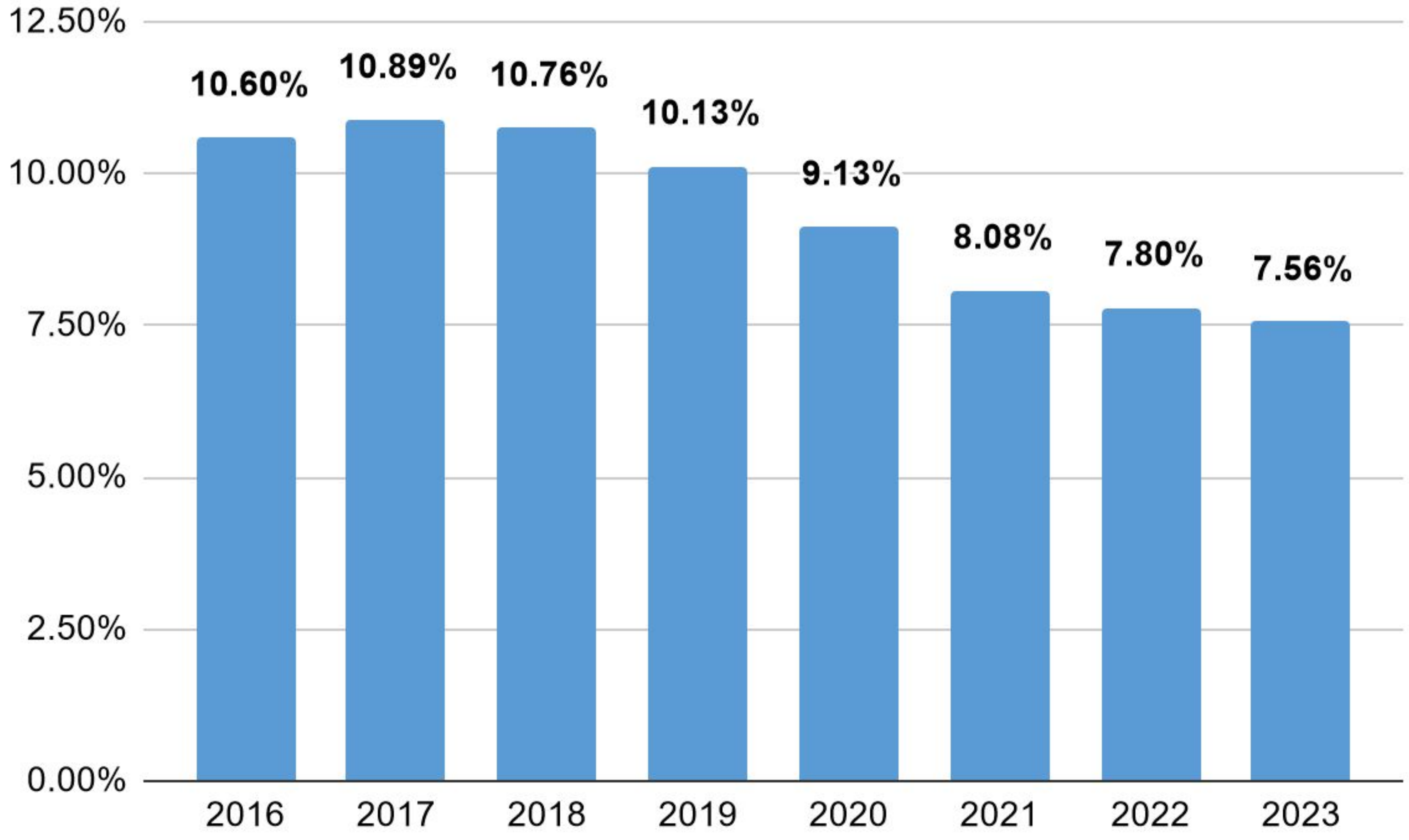
	Corporate bond Funds	Gilt Funds	Dynamic Bond fund
Over a rolling 1-year-return period			
Min. returns	1.75	-0.5	1.37
Max. returns	12.18	16.79	11.51
Avg. returns	6.25	6.03	6.19
Over rolling 3-year-return periods			
Min. returns	4.17	4.5	5.03
Max. returns	9.05	10.72	8.76
Avg. returns	7.56	8.32	7.28
Over rolling 5-year-return periods			
Min. returns	5.33	5.71	5.63
Max. returns	9.07	10.85	10.77
Avg. returns	7.96	8.7	7.89

Source: Prime investor

Credit Risk Fund

- Credit Risk Mutual Funds invest at least 65% in low-credit quality debt securities (AA or lower).
- The fund is suitable for high risk investors
- Generally managed at a high expense ratio
- Carries liquidity risk in an market turbulence.
- Diversified portfolio is beneficial over concentrated portfolio because of exit risk

3 year Rolling Returns



Source: Prime investor: average rolling 3 year returns of median funds

Banking & PSU Debt Fund

- Banking and PSU Debt Fund invests 80% of the corpus in AAA Bank and PSU Companies and rest in G-Sec and corporate debt.
- Carries high interest rate risk
- Banks are regulated entity and PSU bonds are government debt
- Presence of Bank Tier - I bonds in the portfolio increases the volatility of the fund as these are perpetual bonds and duration is calculated as 100 years for this bonds .

Floating rate Fund

- Floating rate fund invests at least 65% of its net assets in floating rate instruments.
- They invests in either floating rate instruments or in fixed coupon which are converted to floating rate by using Swaps.
- Low interest rate risk and duration risk.
- These are beneficial in an increasing rate environment
- Liquid funds and ultra short duration funds invest in instruments maturing within 3-6 months,allowing the funds to capture rising near-term yields than FRBs

Conservative Hybrid Fund

- The fund has a mandate to invest 75-90% in debt and remaining in equity and REIT (10-25%)
- Small exposure to equity allows these schemes to earn better returns than pure debt schemes
- Funds bring a level of diversification to your investment portfolio through a single investment rather than through multiple investments.
- Taxation similar to debt funds
- Just like Dynamic debt fund it can invest in any maturities and securities as per the opportunity available, also equity component can invest in any of large,mid and small cap stocks
- Suitable for medium to long term horizon

	Fund 1	Fund 2
YTM	7.91%	8.29%
Modified Duration	2.87	1.17
Large Cap Investments	13.97%	15.58%
Mid Cap Investment	3.68%	2.34%
Small Cap Investments	5.40%	4.55%
GOI	50.83%	17.36%
A1+	0.00%	14.65%
AA+ and above NCD	17.62%	16.25%
AA and below	1.11%	20.78%
Cash	7.39%	8.45%
Expense Ratio	0.44%	0.99%

How to choose a debt Fund

- A debt fund's key is the YTM; not past returns
- If the YTM of a debt fund is significantly higher than its peers in the same fund category or duration profile, then check the credit ratings of the underlying securities in the portfolio
- A well-diversified portfolio mitigate the concentration and liquidity risk of the portfolio
- Expense ratio of a debt fund give you a ballpark idea of the future returns of the debt scheme.Higher expense ratio in debt funds will hurt returns
- Ensure Duration of the debt fund matches your investment holding time frame other than active funds with mandate of dynamic duration

RBI Direct Lending Scheme

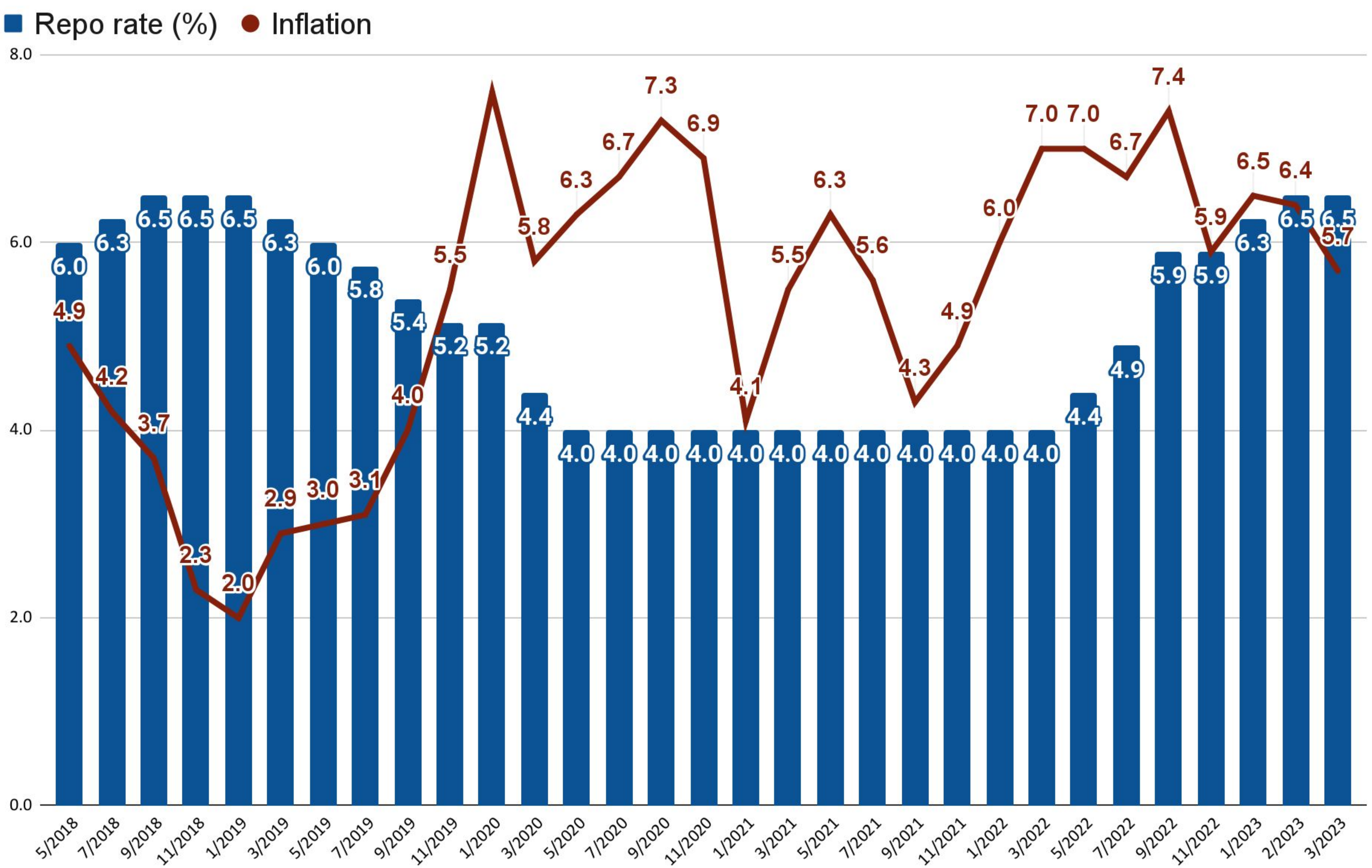
- Under this scheme individual retail investors can open Direct Gilt Account account with RBI
- Retail investors can buy and sell T-Bill ,G-Sec and SDLs through the online portal
- Minimum amount required to invest is 10,000 per security
- Investors face high interest rate risk and liquidity risk
- Taxation of interest received is charged as per income tax slab and long term capital gain (12 months in these category) is taxed @10% without indexation benefit

Direct Investment in listed Bonds

- Facilitates direct investment in debentures of PFIs and corporates
- Allows investment in bonds through demat account
- Interest is taxable as per tax slab and LTCGs above 1 years is taxed @ 10% without indexation benefit
- The major drawback is low liquidity.
- Also the investor face concentrated risk
- Carry credit Risk.

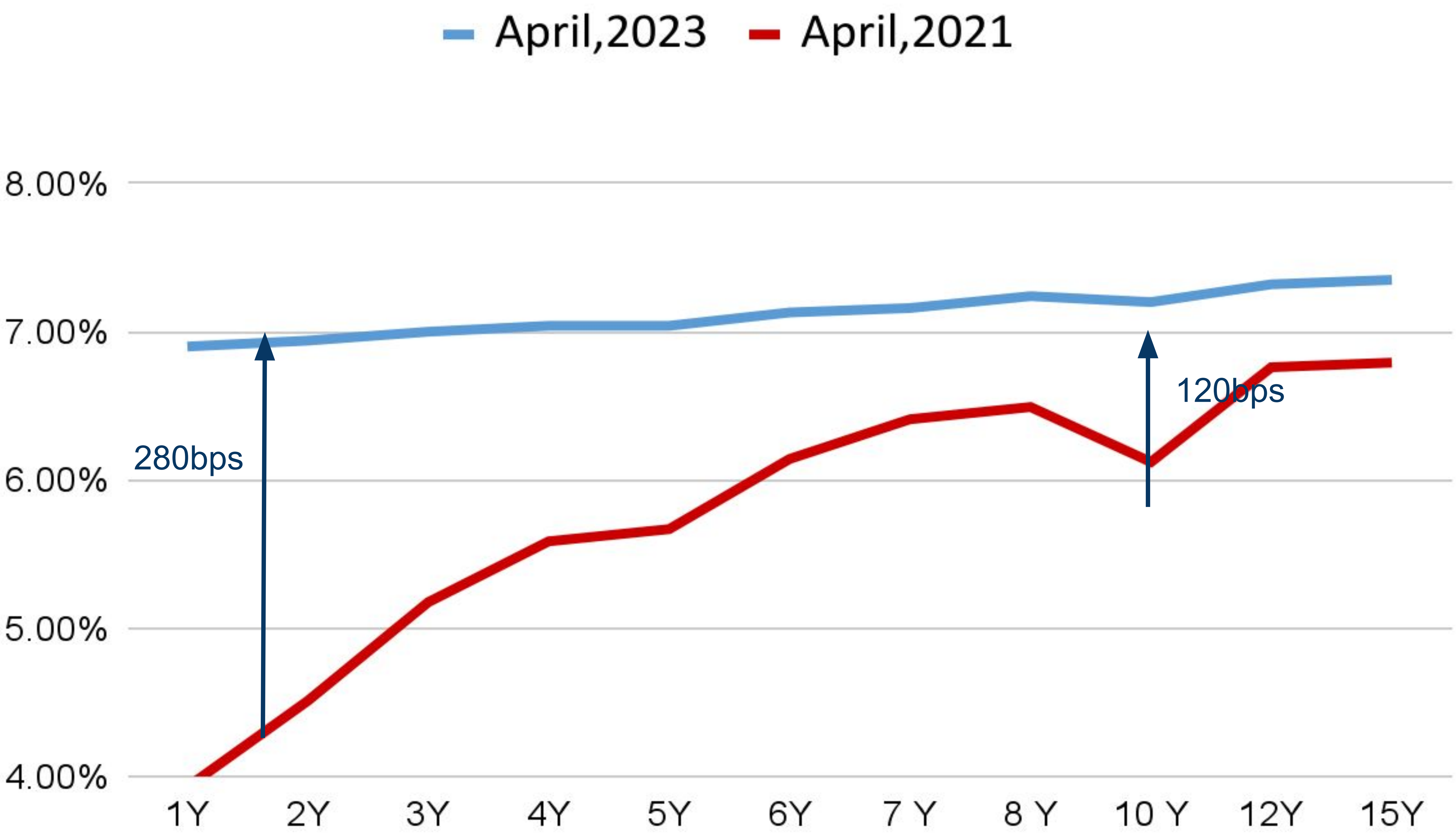
Current Market Scenario

Repo rate and Inflation rate



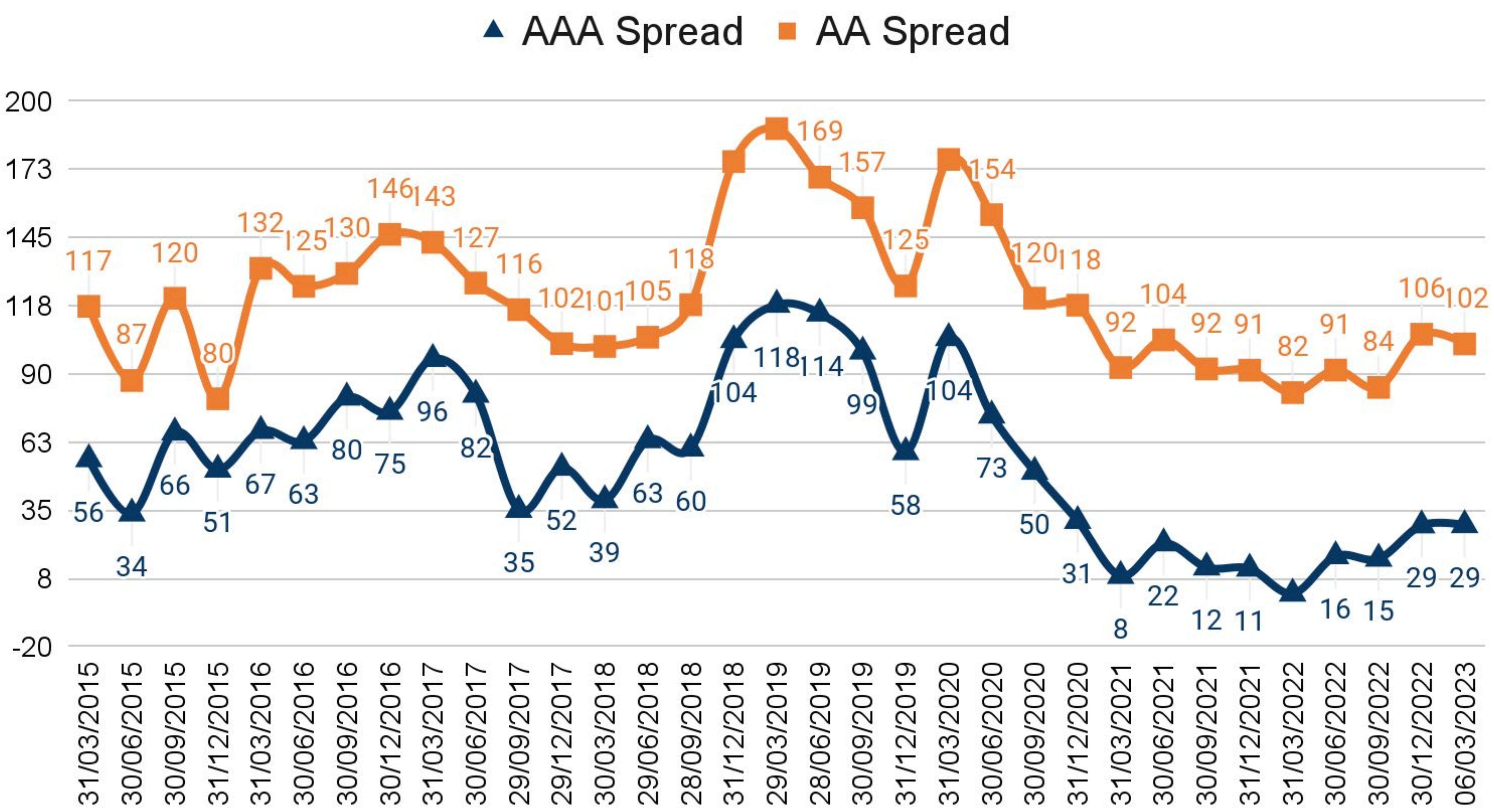
Source: https://www.rateinflation.com/inflation-rate/india-historical-inflation-rate/

G-Sec Yield Curve

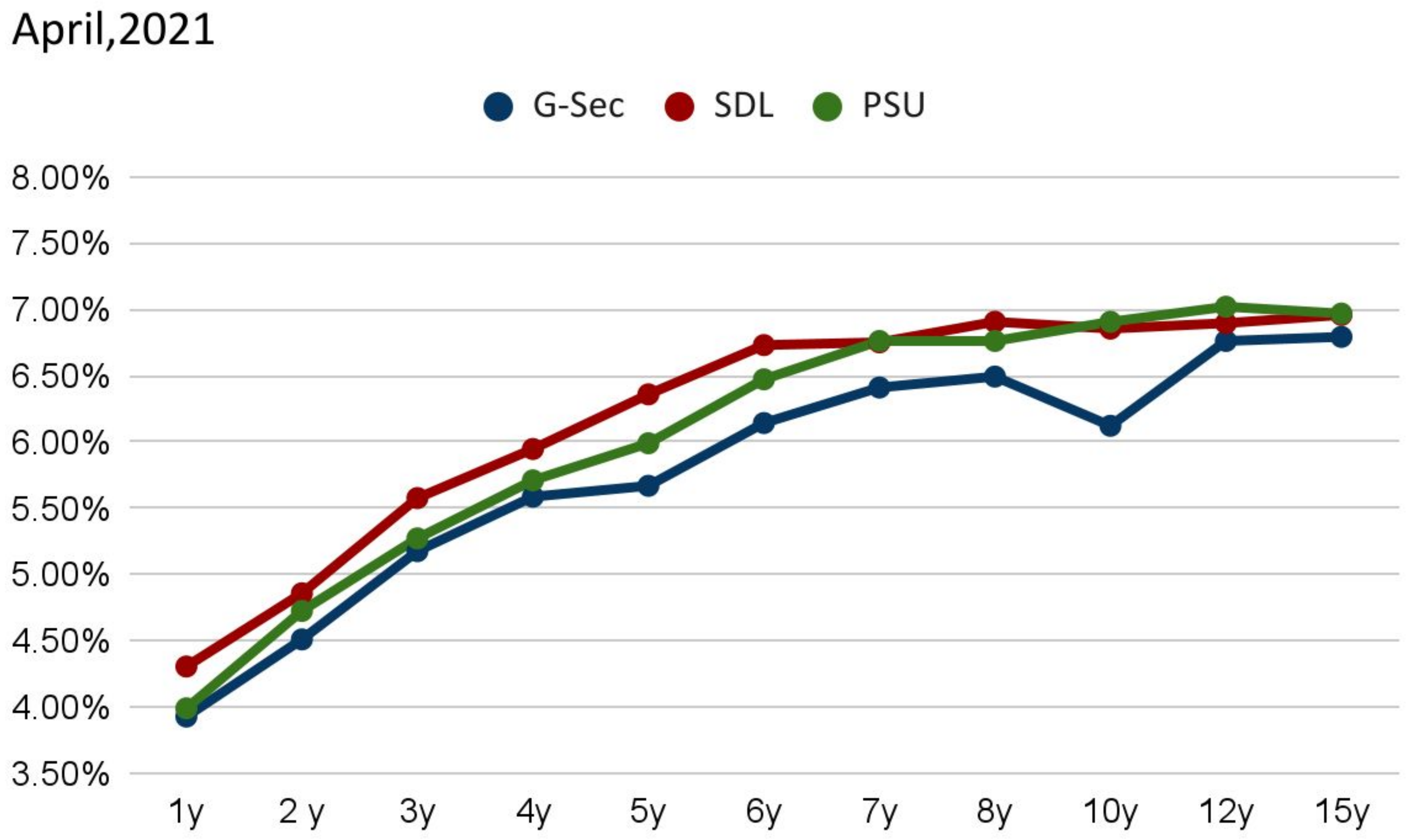


Source: ccilIndia.com

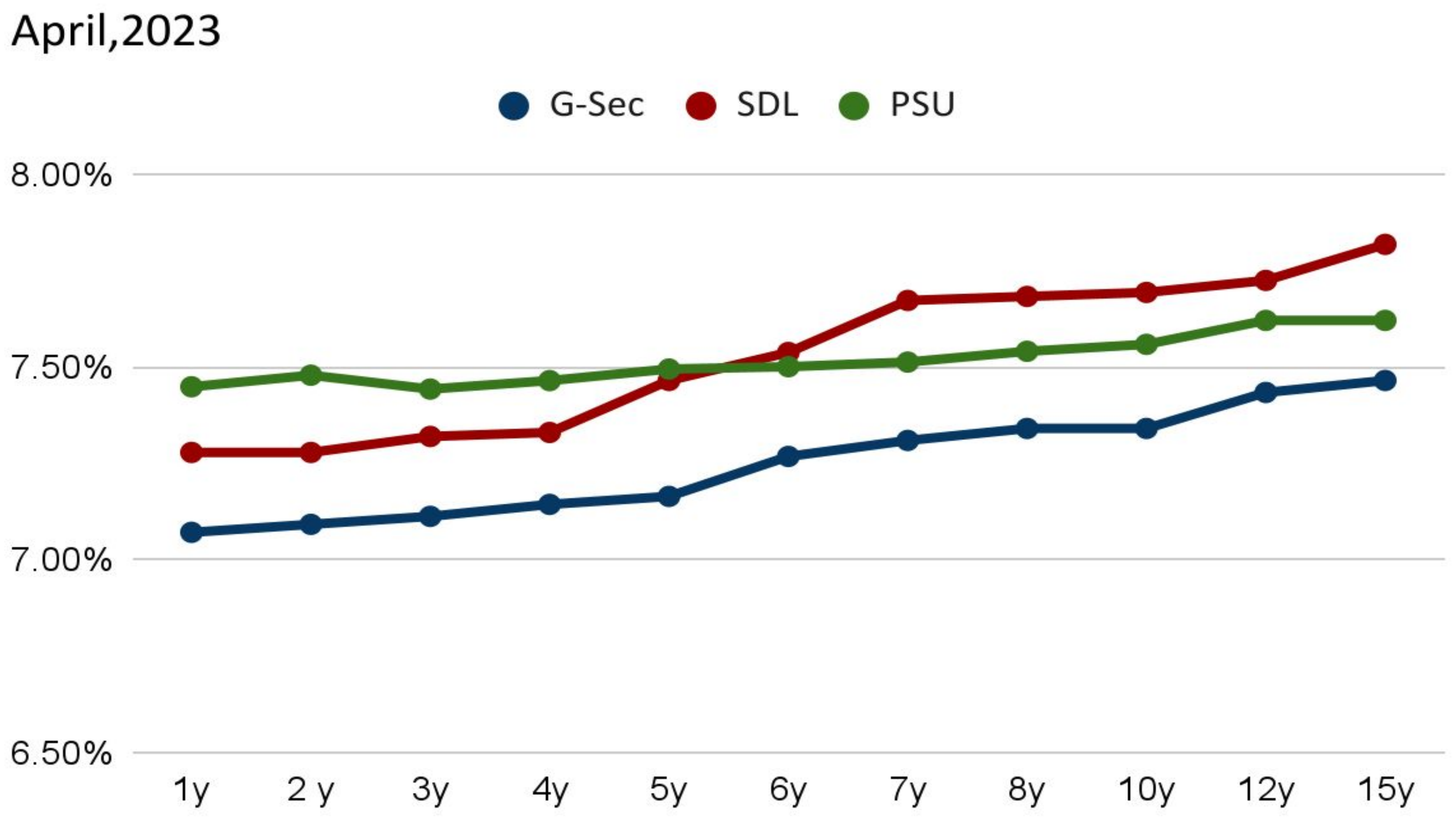
5 Year AAA & AA rated Corporate bond credit spread



Source: Bloomberg



Source: G-Sec and SDL data from CCIL .For PSU , average of 5 PFIs yield rates



Source: G-Sec and SDL data from CCIL .For PSU, average of 5 PFIs yield rates

Conclusion

- Liquid funds and other money market funds are best for emergency fund requirements and served as alternative to savings bank account
- For important financial goals with predefined maturity and predictable return requirements target maturity funds are a good alternative which can be compared with bank fixed deposits , with high liquidity and low credit risk
- To earn risk adjusted return with changing market conditions, dynamic duration funds and conservative hybrid fund serve the purpose with min three years of investment horizon

Thank you